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EXAMINER	
WANG, TED M	

ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/731,500	MASTRANGELO, GIUSEPPE	
	Examiner	Art Unit	
	Ted M. Wang	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date. _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed on 01/23/2008, have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference to reasonably and properly meet the claimed limitations.

Independent Claims 1, 7 and 14

(1) *Applicants' argument* – "With respect to point 1 of the Office Action, Examiner Wang states: The cited paragraph, column 16 lines 13-23 of the Kaku's reference does teach that the measurements require the knowledge of the training cable slop (sic). However, in the same paragraph Examiner Wang also states: Instead, the training signal cable slop (sic) is the calculation results of the power level of the received signal. *It is not understood how the user of the Kaku et al patent can determine results of the power level without the use of some kind of training slope since the training slope is, as stated above, "the calculation results of the power level of the received signal"?*" as recited in page 8 of the remark, dated 1/23/2008.

Examiner's response –

Column 16, lines 6-12, of Kaku's reference teaches that the level of a signal in the intermediate band 34 of transmission data is calculated as amplitude value characteristic information by averaging levels of the Nyquist frequency signals 32 and 33 of a receive signal (Fig.6(b)). It can

be judged whether or not how large a receive signal is attenuated as a whole by comparing the level of the intermediate band with a reference signal level (Fig.3 elements 5-9, where the PWR 5 output is the calculated value of the averaging levels 34 of the Nyquist frequency signals 32 and 33 of a receive signal that is compared to a reference level from REF 7 output and generates a difference used to control the LEQ 1.) It is clear that the amplitude correction filter circuitry 16 does not require the knowledge of a training signal cable slope.

(2) *Applicants' argument* – "With regard to point 2 in the Office Action, Examiner Wang has interpreted both the Nyquist frequency signals and the transmission data as being the same signal, i.e. both are part of the received input signal, and thus has not differentiated between the two. Applicant respectfully points out to Examiner Wang that the measuring of frequency signals that have been added or super imposed onto a transmitted data signal is not the same as measuring the actual data transmission signal. The "what" that is being measured is an important difference in understanding the distinctions between Applicant's invention and the '875 Kaku et al patent. The "what" that is being measured in the Kaku patent is the super imposed frequencies. The "what" that is being measured in Applicant's invention is the data transmission signal itself. Taking Examiner Wang's position that they are the same would be like expecting to pay the same fee at one toll booth that measures its cost on the number of passengers riding in a car at another toll booth that

measures its fee based on the type of car itself. Even though both arrive at the booth by the same means, a car, the "what" that is measured (the car itself vs. items riding with the car) to calculate the fee is different and, therefore, the results and methods involved to calculate and pay the fees are different and result in different levels of revenue and value." as recited in pages 8-9 of the remark, dated 1/23/2008.

Examiner's response –

Column 13 lines 1-32 and Fig.5 of Kaku's reference teaches a data transmission system, the transmission data 41 can transmit various data of a transmission rate of 1.5 Mbps from the transmission modem 41 to the receiving modems 42 and 43 via the metallic trunk 44. Data including a large volume of information such as image information (video) can be broadcast between the transmission modem 41 and the receiving modems 42 and 43. The receiving modem 42/43 is shown as Fig.3.

Column 15 line 22 – column 16 line 12 and Fig.3 of Kaku's reference teaches an adjustable line equalizer 1 (adjustable amplitude correction filter) that is adjusted by the control unit 16. The line equalizer 1 receives broadcast signal from modem 41. The modulator 2 demodulates a received signal from the line equalizer 1. The ROF 3 shapes the waveform of the demodulated received signal. The output signal from the ROF 3 is supplied to BOTH control unit for the measurement of the content (signal level with different frequencies (tones)) and the receiving

signal processing unit 15 which process the receive data to recover the broadcast signal transmitted by modem 41. It is clear that the broadcast data signal (Fig.3 element 1, LEQ, input (i.e. Fig.5 element 42 input), and 3, ROF, output) used for the measurement of the content (Fig.3 element 16) is the data transmission signal (Fig.3 element 1, LEQ, input (i.e. Fig.5 element 42 input), and 3, ROF, output) used to generate the audio and/or video (Fig.3 element 15 and column 15 lines 22-33) at the receiver locations.

(3) *Applicants' argument* – "In Applicant's invention, the installation apparatus and circuitry within the broadcast data receiver is set to measure the power level at the incoming broadcast data signal at two predetermined positions, typically at the bottom and top of the band. This measurement is undertaken by measuring the content of the automatic gain converter having only one switch filter. In addition, the relative signal strength is used in Applicant's invention rather than an absolute signal strength to set up the receiver. For instance, if the relative power difference is greater than a predetermined level, then a switch in the linearization circuit would be used for equalization as required so that the incoming signal is then within the predetermined parameters. The required differences in the high end and low end signals can be brought to within the required parameters by changing the values of the inductors, capacitors and/or resistor and obtaining varying equalization slopes. One of the advantages of Applicant's invention is that the added circuit to the broadcast data

receiver reduces the number of tuners required and therefore reduces the cost." as recited in pages 9-10 of the remark, dated 1/23/2008.

Examiner's response –

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies as recited in the above paragraph are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, for the explanation addressed in the above paragraph, the rejection under 35 U.S.C. 102(b) with Kaku's reference is adequate.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-9, 11, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter).

- With regarding claim 1, Kaku teaches a method of installation of a receiver to receive broadcast data transmitted from a broadcaster (Fig.5 elements

41 and 44 and column 13 lines 26-30) for use to generate audio and/or video, where Kaku teaches transmitting and receiving image information or data that is a video picture information, between two modems at each receiver broadcast continuously to a plurality of locations including the location of the receiver (col. 3, lines 21-32, col. 4, lines 7-10), said method comprising:

measuring the power level of the broadcast data signals (column 15 line 34 – column 16 line 12,) at two predetermined spaced points on the signal band (Fig.6 elements 32 and 33) by measuring the content of automatic gain control converters relating to said broadcast data signal within the receiver (col. 4, lines 11-19, col. 8, lines 17-21),

providing an amplitude correction filter (Fig.3 element 1, LEQ) which can be selectively operated on said broadcast data signal to allow the correction of amplitude variations with frequency (column 16 lines 1-12), the selective operation of the filter dependent upon and responsive to the power level measurements obtained (Fig.3 element 5 and col. 8, lines 29-34 and column 17 lines 1-7) from the signal transmitted from the broadcaster without having knowledge of a training signal cable slope (refer to argument addressed in the above paragraph), and

wherein the broadcast data signal used for the measurement of the content is the data transmission signal used to generate the audio and/or video at the receiver locations for display at the receiver location for the

purpose of viewing the display. (Column 13 lines 1-32 and Fig.5 and column 15 line 22 – column 16 line 12 and Fig.3)

Column 13 lines 1-32 and Fig.5 of Kaku's reference teaches a data transmission system, the transmission data 41 can transmit various data of a transmission rate of 1.5 Mbps from the transmission modem 41 to the receiving modems 42 and 43 via the metallic trunk 44. Data including a large volume of information such as image information (video) can be broadcast between the transmission modem 41 and the receiving modems 42 and 43. The receiving modem 42/43 is shown as Fig.3.

Column 15 line 22 – column 16 line 12 and Fig.3 of Kaku's reference teaches an adjustable line equalizer 1 (adjustable amplitude correction filter) that is adjusted by the control unit 16. The line equalizer 1 receives broadcast signal from modem 41. The modulator 2 demodulates a received signal from the line equalizer 1. The ROF 3 shapes the waveform of the demodulated received signal. The output signal from the ROF 3 is supplied to BOTH control unit for the measurement of the content (signal level with different frequencies (tones)) and the receiving signal processing unit 15 which process the receive data to recover the broadcast signal transmitted by modem 41. It is clear that the broadcast data signal (Fig.3 element 1, LEQ, input (i.e. Fig.5 element 42 input), and 3, ROF, output) used for the measurement of the content (Fig.3 element 16) is the data transmission signal (Fig.3 element 1, LEQ, input (i.e. Fig.5

element 42 input), and 3, ROF, output) used to generate the audio and/or video (Fig.3 element 15 and column 15 lines 22-33) at the receiver locations.

- With regard claim 2, Kaku further teaches wherein obtaining the power level measurements occurs automatically and is followed by any required correction as pad of an automatic installation procedure (col. 4, lines 7-10 and col. 36, lines 13-21).
- With regard claim 3, Kaku further teaches wherein two measurements are taken, referred to as the high end signal and the low end signal (col. 8, lines 17-21).
- With regard claim 5, Kaku further teaches wherein if the difference in power level between the points is greater than a predetermined level then the power level to said broadcast data receiver is adjusted so that the incoming signal is within a known power range (col. 25, lines 6-19).
- With regard claim 6, Kaku further teaches the method utilizes the ability to use relative signal power level rather than absolute power level to install the receiver (col. 8, lines 29-34).
- With regard claim 7, Kaku teaches an apparatus for receiving broadcast digital data for use to generate audio and/or video at each receiver which is transmitted and received by the apparatus and passed to the receiver via an radio frequency input from the data carrying network (col. 3, lines 21-32 and col. 4, lines 7-10), said receiver comprising:

a linearization circuit which can be selectively activated to operate with the receiver control system upon comparison of measurements of the power levels at two predetermined points (Fig.6 elements 32 and 33 and 33 and column 16 lines 1-12) on the signal transmitted from a broadcaster (Fig.5 elements 41 and 44 and column 13 lines 26-30) passed to the radio frequency input without having knowledge of a training signal cable slope (refer to argument addressed in the above paragraph) and, if the comparison reveals a difference which is greater than a predetermined level, the linearization circuit is activated to adjust the receiver settings during an installation procedure for the broadcast data receiver at a location at which the receiver is to be subsequently used (col. 8, lines 17-21 and 29-34 and col. 25, lines 2-19), and wherein the broadcast data signal used for the measurement of the content is the same as that used to generate the audio and/or video at the receiver locations for display at the receiver location for the purpose of viewing the display. (Column 16, lines 29-36, of the Kaku's reference specifically teaches that the measurement is using the actual data without training (test) signal. In fact, Kaku's invention is so designed to solve the issue that using the training signal is time consuming and it is impossible to start transmitting data immediately after trunk connection (column 3 lines 21-26) for a communication system which includes plural modems connected in parallel on a receiving side to broadcast data from a transmission side modem. In addition, any received broadcast signal will be no longer an actual broadcast signal generated by transmitter since the noise or other broadcast

signals can interfere with the broadcasted signal used to generate video/audio and displayed to the user."

- With regard claim 8, Kaku further teaches wherein said receiver is connected to a data supply network in which the data is carried by a cable network (col. 1, lines 4-6).
- With regard claim 9, Kaku further teaches wherein said linearization circuit is selectively activated automatically by said receiver control system upon specified criteria for activation being met (col. 25, lines 2-19).
- With regard claim 11, Kaku further teaches wherein said linearization circuit performs cable slope correction internally in said broadcast data receiver and this can be applied to improve the performance of the broadcast data receiver at the location of installation (col. 25, lines 6-19).
- With regard claim 14, Kaku teaches a method of installation of a receiver to receive digital data for use to generate audio and/or video at each receiver which is broadcast to the location of the receiver (col. 3, lines 21-32, col. 4, lines 7-10), said method comprising:

  measuring the power level of incoming frequency signals at two predetermined spaced points (Fig.6 elements 32 and 33) on the signal band (col. 4, lines 11-19, col. 8, lines 17-34, col. 10, lines 29-37, col.11 lines 12-27, col. 17, lines 8-18, and col. 23, line 42 – col. 24 line 11, and Fig.19 element 6, REF1 and REF2),

  providing means for the comparison of the measurements (column 16 lines 1-12) without having knowledge of a training signal cable slope

(refer to argument addressed in the above paragraph) and if the comparison shows a value within a predetermined parameter an indication is provided to the installer and if the comparison shows a value out with the predetermined parameter a control system in the receiver adjusts the operation of one or a combination of components within the receiver until the value is within the predetermined parameter (col. 8, lines 17-24, col. 25, lines 2-19, Fig.3 and 9, where the compared signal from adder 6 output is integrated 8 and feedback to the LEQ for correction and the operation is repeated until the value is within the predetermined parameter), and wherein the broadcast data signal used for the measurement of the content is the same as that used to generate the audio and/or video at the receiver locations for display at the receiver location for the purpose of viewing the display. (Column 16, lines 29-36, of the Kaku's reference specifically teaches that the measurement is using the actual data without training (test) signal. In fact, Kaku's invention is so designed to solve the issue that using the training signal is time consuming and it is impossible to start transmitting data immediately after trunk connection (column 3 lines 21-26) for a communication system which includes plural modems connected in parallel on a receiving side to broadcast data from a transmission side modem. In addition, any received broadcast signal will be no longer an actual broadcast signal generated by transmitter since the noise or other broadcast signals can interfere with

the broadcasted signal used to generate video/audio and displayed to the user."

- With regard claim 15, Kaku further teaches wherein the control system adjusts the operation with reference to at least one algorithm in the control system (col. 25, lines 2-19, Figs. 24, 25, 27).

Claim Rejections – 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 12, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Bazes et al. (U.S. Patent No. 5,991,339, "Bazes" hereinafter).

- With regard claims 12 and 16, Kaku teaches the claimed invention (see the rationale applied to claims 11 and 14 above), but does not particularly teach changing the values of the inductors, capacitors and/or resistors to obtain one of a number of equalization slopes to bring the difference between the high end signal and low end signal within a specific margin.

  However, the use of adjustable inductors, capacitors and/or resistors to control the frequency response of an equalizer is well known in

the art. Bazes teaches an adaptive equalizer that can adapt to various transmission medium lengths and signal degradation levels (abstract). The transfer function of the equalizer may be controlled by the adjustment signal that specified the resistance value (col. 2, lines 63-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the values of resistors to control the frequency response of the equalizer such that the equalizer can adapt to various transmission medium lengths and signal degradation levels.

- With regard claim 13, Kaku in view of Bazes does not teach that the specific criteria is for a difference between the high end and the low end signal values greater than 10 dB. However, the selection of the difference value as the specific criteria would not change the operation of the system of Kaku/Bazes. Such value is arbitrarily selectable to meet the system requirement such as error tolerance of the error caused by attenuation. Therefore, the claimed value of 10 dB is clear a matter of design choice, dictated by the system requirement and user's need.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Leung et al. (U.S. Patent No. 6,542,540, "Leung" hereinafter).

- With regard claim 4, Kaku teaches the claimed invention (see the rationale applied to claim 1 above), but does not particularly teach that no

linearization via the filter is performed if the high end signal level is greater than the low end signal level.

However, whether to perform linearization for a particular situation is merely a design option, dictated by the user's error tolerance for the error caused by the attenuation. Leung teaches that high frequency boost is not required when the high frequency attenuation is relatively small (col. 6, lines 1-3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made not to perform linearization when the high frequency is small, so as to reduce the cost and initialization of the modem.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Porter et al. (U.S. Patent No. 6,167,081, "Porter" hereinafter)

- With regard claim 10, Kaku teaches the claimed invention (see the rationale applied to claim 8 above), but does not particularly teach that the install activates the linearization circuit upon receiving an indication that specified criteria have been met. However, such feature is well known in the art. Porter teaches a receiver that activates the equalizer when receiving an indication that specified criteria has been met (col. 6, lines 50-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the feature of activating linearization circuit as claimed, so as to activate the linearization

circuit only when required and consequently to save the cost and time caused by the linearization circuit.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ted M Wang/
Primary Examiner, Art Unit 2611